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REPORT OF

THE FIRST INTERGOVERNMENTAL MEETING OF EXPERTS ON THE ESTABLISHMENT OF IRON AND STEEL INDUSTRY IN EASTERN AND SOUTHERN AFRICAN SUBREGION

(Addis Ababa, 25-29 May 1981)

81-1706

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A. ORGANIZATION AND PARTICIPATION

1. The first Intergovernmental Meeting of Experts on the Establishment of Iron and Steel Industry in Eastern and Southern African Subregion was organized by the Economic Commission for Africa at Addis Ababa, Ethiopia, from 25 to 29 May 1981.

Participation

2. Representatives of the following member States participated in the meeting: Ethiopia, Kenya, Lesotho, Malawi, Uganda and Zimbabwe. Consultant: Engineer F. Abouzaghla.

3. The meeting unanimously elected Mr. Charles O. Okui, Uganda, as Chairman and Mr. Thomas S. Mercer, Zimbabwe, as Rapporteur.

B. AGENDA

4. The following provisional agenda was unanimously adopted as amended:

1. Opening of the meeting:

   - Opening statement by the Executive Secretary of ECA

2. Election of officers

3. Adoption of the agenda and organization of work

4. Presentation of country experiences in the development of iron and steel industry in the Lusaka-MULPOC countries

5. Presentation of the Egyptian Experience in the Integrated Development of the Iron and Steel Industry in Egypt (ECA/IMP/I&S/BP.2)

6. Presentation of and discussion on Issues for Discussion (ECA/IMP/I&S/BP.1) and the Preliminary Report on the Development of Iron and Steel Industry and related Metallurgical Facilities (ECA/MULPOC/Lusaka/IV/6):

   Part I: Existing situation
   Part II: Proposals for development of and collaboration in the Iron and Steel Industry

7. Conclusions and recommendations

8. Any other business

9. Second meeting: Agenda, date and venue

10. Adoption of the draft report of the meeting

11. Closing of the meeting

C. ACCOUNT OF PROCEEDINGS

Opening statement

5. The meeting was opened by Mr. G. Kimani, Director of the Joint ECA/UNIDO Industry Division on behalf of the Executive Secretary who was unavoidably absent.

6. In his opening statement, the Director of the Joint ECA/UNIDO Industry Division said that the decision of the fourth meeting of the MULPOC Council of Ministers and the second extraordinary meeting of the Ministers of Trade, Finance and Planning of subregion to convene the intergovernmental meeting of experts was a reflection on the major role played by the iron and steel industry in economic development. Economic development may be measured in terms of the per capita consumption of iron and steel, and the iron and steel industry provides the major inputs for the engineering industry itself, a carrier of technology and a supplier of inputs to agricultural, transport, telecommunications, mining, energy and food processing equipment and machinery, and the spare parts industries.

7. The region is endowed with a wide range of mineral ores currently exploited for exports in the form of raw or concentrated ores and crude metals. In 1977, Africa imported 4.0 million tons of iron and steel valued at US$2.3 billion and exported 9.7 million tons of iron ore and concentrates with iron content equal to the imported iron and steel and valued at US$0.3 billion. The balance of US$2.0 billion which was financed from export earnings from other commodities and external finances borrowed at high interest rate had to be used to pay for the US$2.0 billion imported steel. Although there are internal and external constraints contributing to the failure of the region to develop the iron and steel industries, it was about time the countries of the region came together and approach the issue on a multinational basis.

8. He urged the experts to examine and appraise critically the ECA suggestions concerning the subregional programme of action and collaboration and also evolve their own ideas on the development of the iron and steel industry. He briefly outlined the major issues which are to be considered namely: promoting trade in raw materials, energy, and basic intermediate and final products; formulating collective strategy that would strengthen the negotiating power of member States vis-à-vis a third party; assessing technological manpower, infrastructural and final implementation of iron and steel project policies, strategies and modalities of co-operation. The idea of the multi-national approach is to ensure that the national plants benefit from a subregionally articulated market.

9. He expressed the hope that at the end of the meeting concrete recommendations would be made for submission to the Lusaka MULPOC Council of Ministers, whose decision will have to be implemented by the Experts. The UN system particularly ECA and UNIDO would, on request, and within the limits of their resources, assist and backstop their efforts.

Presentation of country experiences in the development of iron and steel industry in the Lusaka-MULPOC countries (agenda item 4)

10. The Zimbabwe delegate commenced by presenting an information paper on his country by outlining the development of the iron and steel industry and related metallurgical facilities in Zimbabwe. In describing the existing situation, he mentioned RISCO Steel Works in Zimbabwe which currently employs 5,500 employees producing billets, slabs heavy sections, bars, etc. The production capacity of one million tonnes per annum had not been achieved due to breakdowns in the plant and lack of financial resources. The

maximum production achieved had only been a little over 800,000 tonnes to date. Approximately 75 per cent of steel production is exported. The foundry industry is also well established in Zimbabwe. The established foundries cast a wide range of ferrous, non-ferrous and steel articles. A very substantial export trade has also been built by these companies. Other products such as tubes and pipes, screws, bolts and rivets, stainless steel are also manufactured. He concluded by saying that the natural export market for all these products was within the African continent which industrialists were very keen to develop further.

11. Following the presentation of Zimbabwe's country experience, delegates discussed issues raised in the presentation and enquired after the possibility of Zimbabwe exporting these raw materials to other countries of the subregion and also the feasibility of his country importing minerals from the rest of Africa bearing in mind Zimbabwe's endowment with a wide range of minerals. In replying, the delegate of Zimbabwe stated that it will be a better policy to exploit those trade opportunities presented within the rest of Africa provided, of course, his country has established such markets. His country was also faced with certain critical problems, namely lack of financial capacity to finance projects relating to iron and steel such as plate mill and its inability to export more by rail due to the shortage of rail trucks and locomotives. Further, delegates sought information on possible areas of co-operation and enquired whether it was possible to establish an iron and steel plant in a country lacking in all the raw materials. In response, the delegate from Zimbabwe stated that any country wishing to establish an iron and steel industry could start by utilizing raw materials or products available from Zimbabwe, and could also benefit from progress made in Zimbabwe by study visits to the iron and steel sites.

12. The problem of transportation particularly as it relates to iron and steel was also raised. Delegates wanted to know whether the ECA had done any studies relating to this. The secretariat informed the meeting that there was a wide range of studies for the implementation of the Transport and Communications Decade which are currently being reviewed. After consultation with the ECA Transport Division, some guidelines will be submitted to the second intergovernmental meeting of experts.

13. In presenting his country's experience, the delegate of Kenya said that although his country's experience was not as rich as others, his Government had plans to develop an iron and steel industry. In 1976 a sector study on metal and engineering industry was undertaken. The study indicated that Kenya used a lot of flat products. The present consumption of steel is 300,000 tonnes per annum and by 1990 a figure of about 400,000 to 500,000 tonnes per annum of flat products has been projected. Furthermore, a full study way carried out in 1979 which confirmed that an iron and steel industry could be established. This study was basically in two parts. One dealing with market, technology and infrastructure, the other with financial and sensitivity analysis to see whether the project would be viable. The type of technology identified for production of both flat and non-flat products made it imperative that the major raw materials should be readily available. Since Kenya is not favourably endowed with raw materials, the Government plans to import them. He also pointed out that certain downstream industries have been identified, and would be in operation by 1984. The production capacity of the proposed steel plant is 600,000 tonnes during the first phase, i.e. up to 1990. The plant will supply the existing re-rolling mills with their extra requirement for billets. The balance of crude steel will be rolled into slabs for re-rolling into sheets and coils to satisfy the projected demand. In the initial plan, account is not taken of possible exports of flats to the neighbouring states. The possibility of supplying flats and non-flat products to other states in the subregion will be considered in the context of the proposed PTA.

14. Finally, he enumerated major problem areas and emphasized the problems of finance, energy and market which should be carefully considered if the iron and steel project is to be successfully implemented.

15. The delegate from Uganda presented his country's experience and stated that Uganda is endowed with deposits of iron ore, mainly magnetite, in eastern Uganda at Tororo. There are also substantial deposits in the western and southern parts of the country especially Kigezi. These are very high grade hematite ores whose content is about 68 per cent to 70 per cent Fe. Iron and steel has been accorded high priority by the Government. In describing the existing situation, he stated that there is one steel mill at Jinja, utilising scrap which is fastly depleting. In 1973, M.S. Atkins & Partners were commissioned to conduct a study on the development of iron and steel based on the iron ore in Tororo, the prefeasibility study indicated that although there was a large deposit of ore, there were impurities of titanium of about 1.30 per cent.

16. The country has hydro-electric power, limestone and charcoal potential for the establishment of an iron and steel complex. However, there are certain basic infra-structures such as transport system especially in Kigezi which may be regarded as a major constraint to the exploitation of the ore. The problems of finance and market are also to be studied carefully.

17. The Ethiopian delegate in his presentation , pointed out that among the metal working plants in the country the rolling mills which have a capacity of 63,000 tonnes per year is based on domestic scrap and imported billets. The activities of the mills are limited to the production of merchant products, reinforcement bars, nails, wire, etc. However, the capacity of the mills are limited because of lack of basic raw materials, spare parts and skilled manpower both at the managerial and technical levels. He further stated that small-scale industries play an important role in the iron and steel industry. The country has no shortage of electric energy and effort is being made to investigate the availability for raw materials for the industry.

Presentation of the Egyptian experience in the integrated development of the iron and steel industry (agenda item 5)

18. The consultant to the meeting presented a paper (document ECA/INR/I&S/WP.2) which deals specifically with the agenda item. The paper is divided into three parts. The first part deals with the different factors which are to be considered when planning iron and steel industry and collaboration. The first item in this part concerns metallurgy of steel production as a capital-intensive industry which requires some of the highest industrial technology in the world. It can be controlled within the limits of known chemical, physical and metallurgical properties as well as within the limits of process and equipment variability, accuracy of measuring instruments and skills, responsiveness and discipline of the people. The second item concerns forecasting future development which requires detailed product information on various sectors such as construction, machinery, pipes, automobile, etc., and usually in relation to the estimated gross national product. The third item relates to international co-operation which is expected to give better distribution of profit to the developing countries. The fourth item describes the factors which affect collaboration and which stress the importance of geographical distribution of the main resources although other factors such as construction, operation management and organization, finance and market ought to be considered also. In this regard, Japan and Korea are given as examples of countries which have not got the main resources. The other items in this part include the strategies and criteria for access to the iron and steel industry by identifying

favourable conditions such as the size of the population and that of the market. The first part concludes with a recommendation that the field of analysis of the different factors given on the list in the paper should be enlarged.

19. The second part deals with the development of iron and steel industry in Egypt which was carried out in four stages. The first stage was started after the second war by the private sector utilizing available scrap and the hydro-electric energy from Aswan Dam. Three companies were set up for producing reinforcement bars. The second phase started after the 1952 revolution. The Government established the Egyptian Iron and Steel Company in 1954 as the first integrated plant which comprised the iron ore from Aswan mines and have two sintering machines, two blast furnaces and a Thomas shop, blooming mill, heavy and light section mill and plate and sheet mill. The capacity of the plant production was 300,000 tonnes of raw steel. The third phase was the expansion of the plant to raise its production from 300,000 tonnes to 1.5 million tonnes (what is now known as the Helwan steel complex). It was installed through the aid of an agreement between the Soviet Union and the Egyptian Government which required the former to submit a detailed project report and the working drawings for plants and structure of the iron and steel works, coke oven and ore mines. A brief information was given about the different units of the plant and its capacities including the mines, the sintering plant, the blast furnace shop, the steel converters, the continuous casting and the strip mill, medium section mill and cold formed section mill. Also, a special organization was set up to carry out all the studies and negotiations and contracts with the supplier. Another organization was set up specially for the construction and erection until it got to the stage of operation which is carried out by the Iron and Steel Company. A brief description is given on the operation, the problems, difficulties and the experience they gained during this period covering iron ore, coal, energy, equipment, maintenance, manpower and management. Part two ends by making mention of the plan of the fourth phase from 1980-2000 and the investment of US$14 billion needed to raise the production of steel to 15 million tonnes.

20. Part three draws conclusions and makes recommendations which are expected to assist in the development of the iron and steel industry in the Eastern and Southern African subregion.

21. The discussion which followed the introduction of the document centred around the following: procurement, production and transformation of raw materials, mobilization of finance, planning for manpower and management and the critical importance of obtaining correct information since these factors have been identified as major constraints on the development of the iron and steel industry in the Eastern and Southern African subregion.

Presentation of documents ECA/MULPOC/Lusaka/IV/6 - Parts I and II and ECA/INR/ISS/WP.1 (agenda item 6)

22. In introducing the paper on Issues for Discussion, the secretariat reminded the meeting of its mandate which is to prepare a subregional programme for action and collaboration to be submitted to the fifth meeting of the Lusaka-based MULPOC Council of Ministers. Since it is unlikely that the first meeting of experts will fulfil its mandate at one meeting, it is expected that the first meeting will prepare the ground for the second meeting through the exchange of experiences, identification of problems and constraints inhibiting iron and steel development, discussing and reaching broad conclusions on the issues which have been identified in document ECA/INR/ISS/WP.1, discussing and reaching broad conclusions on modalities for co-operation and

collaboration, agreeing on terms of reference for the preparation of country position papers. These papers will be the basis for the second meeting.

23. It was also suggested by the secretariat and agreed by the delegates that the issues outlined in the document ECA/INR/I&S/WP.1 be examined together with the Preliminary Report on the Development of Iron and Steel Industry and Related Metallurgy Facilities (ECA/MULPOC/Lusaka/IV/6) with a view to prepare a subregional programme for action and collaboration.

National markets

24. On the issue of national markets, it was indicated that for direct and indirect steel demand, subregional projections of 3 and 9 million tons have been made for 1990 and the year 2000 respectively - an average of about 170,000 tonnes per country. This tonnage may not justify an integrated and diversified development of the iron and steel industry at national level. Since one of the basic features of the iron and steel industries is economies of scale it will be to the advantage of the various countries to pool both resources and markets at the subregional level. By so doing, each country can therefore establish fabricating facilities to meet part of its own requirement and at the same time, specialize in the production of some final products that may be required by other member States.

25. Delegates agreed with the substance of the issue of national markets, i.e. that in view of the smallness of national markets, the countries of the subregion should consider pooling their resources based on co-operation at subregional level. It was generally felt that ECA secretariat should consolidate its work on the present available information with a view to determining the real pattern and direction of trade within the subregion. Member States should also assist in the exercise by providing details on, among others, the import structure of iron and steel products, the established productive capacity and planned capacities. An inventory of products which are actually produced locally in the subregion should also be taken.

Raw materials and energy

26. On the issue of raw materials and energy, the secretariat pointed out that in the subregion there is a misconception regarding raw materials and energy requirement for iron and steel development, namely that a country must possess all the basic raw materials before embarking on an iron and steel project. The Japanese experience clearly illustrates that a country does not have to possess all the raw materials to be able to produce iron and steel. The arrangement worked out between the Republic of Guinea (the supplier of iron ore), Nigeria and Algeria is another recent example. It is therefore necessary for the countries of the subregion to make arrangements on trade to ensure the supply of raw materials needed in iron and steel production.

27. The meeting agreed that there was a wide scope for co-operation and collaboration in the exchange and use of raw materials and energy. In discussing the rationale and modalities for co-operation in raw material and energy, it was pointed out by a delegate that the proposed infrastructural development of the subregion should be examined to ensure that after the raw materials have been exploited and developed they can be easily transported to neighbouring countries. Another delegate pointed out that, while the co-operation in iron and steel development should start with collaboration in the supply of raw materials, it will be necessary to ensure that the output of any subregional complex are directed towards the satisfaction of the demand for steel in the subregion before any large scale exportation of these products to countries outside the subregion.

28. The ECA consultant, Eng. Abouzaghla, then emphasized the need to have an organ as the central institution for collecting information, to be staffed with experts to plan how co-operation can be achieved at the subregional level not only in the area of raw materials and energy but also in the other areas identified in document ECA/INR/I&S/WP.1.

29. In general, the major areas of collaboration could be in extraction and processing of raw materials since the investment and market sizes are crucial. In the area of iron and steel production it was felt that the immediate area of collaboration could be in the purchase of sponge iron or ingots (crude steel) from primary producers instead of importing the products from outside the subregion.

Procurement of modern technology and plant

30. On the issue of procurement of modern technology and plant, the secretariat pointed out that this is one of the major constraints in the development of iron and steel. Iron and steel industries are highly capital intensive and controlled by a number of transnational corporations which are vertically integrated from raw materials upwards. Almost every country in the subregion lacks the means to increase its bargaining power in securing modern and efficient technology, know-how, machinery, etc. so as to produce competitive products. The secretariat therefore emphasized the need for countries of the subregion to negotiate with suppliers of technology as a group.

31. In the discussion which followed, it was noted that the services of certain regional centres, e.g. the African Regional Centre for Technology in Dakar, the Regional Centre for Engineering Design and Manufacturing in Ibadan, and the proposed African Regional Centre for Consulting Engineering and Management should be fully utilized for the procurement of technology and plant. It was also noted that in the PTA, there are plans to establish a centre for the promotion of industrial development in the subregion which will also be capable of handling certain aspects of the procurement of modern technology and plant.

Skilled manpower

32. The issue of skilled manpower was introduced by the secretariat. The iron and steel industry being a technology-intensive industry requires a high proportion of engineers, chemists and other skilled technical and managerial personnel. A total number of about 78,000 personnel including some 15,000 engineers, other graduates and technicians may be required for the iron and steel industry by the year 2000. In order to be able to produce this number of qualified and skilled personnel the secretariat suggested that member States should individually and as a group formulate manpower policy, strengthen and expand educational and technical institutions, and begin immediately to train a core of people who will be capable of designing, promoting and implementing iron and steel projects.

33. A delegate then asked the secretariat to explain the basis of the manpower projections for iron and steel in the subregion, and the percentage distribution of the various categories of people normally employed in the iron and steel industry. The secretariat indicated that the projections were based on information available in national plans for and studies on iron and steel as reflected in Chapter VI of the basic paper. It was pointed out by Eng. Abouzaghla that the manpower requirement was underestimated. The inclusion of other service functions such as the transport system and operation of mines will increase the manpower requirement considerably. He further stated that, in practice, the number of people to be employed in any iron and steel plant depends on the technology and the organization of work.

34. The secretariat gave a brief description of the status of training facilities in the subregion and at the national level. It was further suggested that a training centre should be part of the investment programme for iron and steel either in the subregion or within the individual countries. Preferably, this Centre should be established during the first phase of the iron and steel project. The system of management should also form an important aspect in the training programme.

35. In view of the shortage of trained engineers and skilled manpower, it was the general understanding that the subregion might have to rely at the initial stage on imported skill. In negotiating for the procurement of technology and plants, training of personnel, in countries supplying technology and plant should form a part of the contract. On-the-job training, i.e. in-plant training can be done at the national level and at existing iron and steel plants in the subregion. Training of the higher cadres can be done at the universities, technical colleges, polytechnics and institutes of technology and where appropriate outside the subregion or the African region.

36. It was agreed that there is a need to formulate manpower policies aiming at reorientating the educational system towards the needs of an industrial society linked to the planned production programme particularly that of the iron and steel industry.

Mobilization of finance

37. In introducing the issue of mobilization of finance, the secretariat pointed out that iron and steel is the most resource/capital intensive industry, the investment of which is characterised by a high cost per unit of output. Since the estimate of national projects ranges from US$430 to 2,760 million it is most likely that member States within the subregion may not be in the position to mobilize such funds or negotiate successfully for the funds from abroad.

38. The meeting agreed that the mobilization of finance is a critical constraint to the development of iron and steel industry and endorsed the secretariats proposal that joint ventures between countries of the subregion should be encouraged so as to increase the bargaining power or position of member States to negotiate the total sum and terms of loans with donor countries or institutions.

Institutional mechanism

39. On the issue of establishing an institutional mechanism for iron and steel development, it was agreed to recommend to the fifth meeting of the MULPOC Council of Ministers that an ad hoc committee follow up and implement the decisions arising from the said meeting.

Possibilities for joint planning and programming

40. This issue was discussed in conjunction with Chapter VI of document ECA/MULPOC/Lusaka/IV/6 which deals with proposed production programmes and areas for collaboration. After a lengthy discussion which identified iron and steel project ideas as well as existing production units the meeting agreed on the following:

(a) that, when necessary, emphasis be made on each country's rehabilitation programme of existing facilities in order to achieve maximum productive capacity, and

(b) that the area of priority for the rehabilitation programme should be clearly identified.

41. In discussing the issue of subregional programme as contained in Chapter VI, part II of document ECA/MULPOC/Lusaka/IV/-, a consensus was reached that additional information was required in order to formulate the programme and identify specific areas of co-operation.

Conclusions and recommendations, other business and second meeting: agenda, date and venue (agenda items 7, 8 and 9)

42. The meeting agreed on broad conclusions in respect of constraints on the development of the iron and steel industry in the subregion. These constraints relate to:

(a) national markets
(b) raw materials and energy
(c) procurement of modern technology and plant
(d) skilled manpower
(e) mobilization of finance
(f) institutional mechanism
(g) joint planning and programming

43. Consequent upon the above, the meeting decided to hold a second meeting, tentatively scheduled for 27 to 31 October 1981 at Salisbury, Zimbabwe, based on a suggestion made by the Kenyan delegation and subject to a formal request to be made by ECA secretariat and acceptance by the Government of Zimbabwe.

44. It was agreed among others that the following activities will be carried out between now and the second meeting:

(a) Each delegation should report the result of this meeting to the appropriate authorities in their own countries;

(b) Each member State should prepare a country position paper to reach ECA secretariat not later than 7 August 1981 and covering the following areas:

(i) raw materials and energy availability,
(ii) current structure of imports of iron and steel products,
(iii) status of the iron and steel industry, including existing capacities and national plans for iron and steel projects,
(iv) information on existing graining institutions and facilities,
(v) areas of co-operation including:

- access to national market
- transport facilities
- possibilities of exchange of products including raw materials (up-dating where necessary the indicative list of commodities relating to iron and steel likely to be traded within PTA);

(c) ECA secretariat and the Bureau of the Meeting should visit those countries not represented at the first meeting in order to appraise them of the outcome of the meeting and provide guidelines as to the preparation of country position papers. The ECA will meet the costs of these visits,i.e. travel and per diem.

(d) The ECA secretariat will up-date the background paper on the basis of the country position papers in time for the second meeting.

45. The meeting agreed on the following provisional agenda for the next meeting:

1. Opening ofmeeting
2. Election of officers
3. Adoption of draft agenda and programme of work
4. Presentation of the report of the first meeting followed by discussions on matters arising for the first meeting
5. Review of National Position Papers
6. Presentation of outstanding issues:
   (a) Transportation problems for iron and steel industry, raw materials and products
   (b) Framework and rationale for co-operation
   (c) Modalities for co-cperation
7. Recommendations to the fifth Meeting of the MULPOC Council of Ministers
   (a) Programme of co-operation in the development of the iron and steel industry in the subregion
   (b) Recommendations on terms of reference, modalities, mandate, and composition of the proposed ad hoc committee on the development of the Iron and Steel Industry in Eastern and Southern African subregion
8. Adoption of the report and closing of the meeting

46. The meeting further agreed that all concerned ECA-sponsored regional institutions mentioned during the course of discussions at the meeting should be invited to attend the second meeting at their own expense.

Adoption of the report and closing of the meeting

47. The draft report of the first Intergovernmental Meeting of Experts on Establishment of Iron and Steel Industry in Eastern and Southern African subregion was adopted with the necessary amendments. Following his closing remarks the Chairman declared the meeting closed at 1.45 p.m. on Friday, 29 May 1981.

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REPORT OF THE FIRST MEETING OF INTERGOVERNMENTAL COMMITTEE OF EXPERTS ON CHEMICALS FOR EASTERN AND SOUTHERN AFRICA

(Addis Ababa, 14-16 September 1981)

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A. ORGANIZATION AND PARTICIPATION

1. The First Meeting of Intergovernmental Committee of Experts on Chemicals for Eastern and Southern Africa was organized jointly by the Economic Commission for Africa (ECA) and the United Nations Industrial Development Organization (UNIDO) and held at Addis Ababa, Ethiopia, from 14 to 18 September 1981.

2. The meeting was opened by Mr. G. Kimani, Director of the Joint ECA/UNIDO Industry Division, on behalf of the Executive Secretary of the Economic Commission for Africa.

Attendance

3. Representatives of the following member States participated in the meeting: Ethiopia, Kenya and the United Republic of Tanzania.

4. The representative of the World Health Organization also attended as an observer.

Election of officers

5. The meeting unanimously elected Dr. Owilla Ouma Olwa, Kenya, as its Chairman and Mr. Hailu Regassa, Ethiopia, as Rapporteur.

B. ADOPTION OF THE AGENDA

6. The meeting adopted the following agenda:

1. Opening of the meeting
   (a) Opening statement by the Executive Secretary of ECA
   (b) Statement by the representative of UNIDO
2. Election of officers
3. Adoption of the agenda and organization of work
4. Presentation of country experiences and discussion on the characteristics, strategies, priorities and constraints of the chemical subsector
5. (a) the characteristics of the chemical subsector - basis for policy formulation
   (b) strategies for developing the chemical subsector
   (c) priorities in the chemical subsector
   (d) problems and constraints
5. Presentation of and discussion on the 'Project Profiles on Chemical Industries' (ECA/MULPOC/Lusaka/IV/7)
6. Special issues requiring detailed discussions and recommendations
   (a) Formulation of policies and strategies for the development of the selected basic projects
   (b) Formulation of programme for the basic production facilities under consideration

(c) Modalities for co-operation and co-ordination

(d) Determination of follow-up activities

7. Presentation of the "Chemical Industry Development Programme"

8. Second meeting: agenda, date and venue

9. Adoption of draft report of the meeting

10. Closing of the meeting.

C. ACCOUNT OF PROCEEDINGS

7. In his opening statement, the Director of the Joint ECA/UNIDO Industry Division, called attention of the meeting to the priority given to basic industries by the successive Conferences of African Ministers of Industry since 1975 and by a series of subsequent missions and expert meetings including the First ECA/UNIDO Meeting of Experts on Chemicals held in November/December 1979 which recommended that pre-investment studies on 16 project ideas be undertaken. He stated that in view of the very high cost of pre-investment studies, there was need for member States to express their wish and firm commitment before any prefeasibility or feasibility studies could be undertaken on the project ideas related to agricultural chemicals (nitrogenous, phosphate and potash fertilizers and pesticides) and pharmaceuticals for Eastern and Southern Africa. He pointed out that project profiles on these project ideas had been prepared and submitted to the Fourth Meeting of the Lusaka MULPOC Council of Ministers held in Maseru in January 1981, which decided to establish an inter-governmental chemical experts committee to be responsible for the promotion of multinational chemical projects in the subregion.

8. The Director underscored the danger of increasing dependence by African countries on non-African countries to feed and cure its peoples and of the widening gap between agricultural production and population growth in relation to the skyrocketing and prohibitive prices of fertilizers and pharmaceuticals. This situation, he stated called for the need to look ahead and plan collectively and to set up agricultural chemical and pharmaceutical industries which were essential for increasing agricultural productivity and improving the health of the peoples. As the scope of national economies were limited because of narrowness of national markets which subsequently did not allow the achievement of economies of scale in operation and because of the inherent huge investment requirements, the development of fertilizer, pesticide and pharmaceutical industries would therefore not be feasible under the prevailing patterns of industrial structures within the subregion, where intermediate inputs and finished products are imported whereas the subregion had all the necessary raw materials for the production of such products. The operation of production facilities based on imported inputs was therefore limited because of the perennial foreign exchange problem. In this regard, he wondered what chance existed at establishing viable capital intensive projects on agricultural chemicals and pharmaceuticals production facilities, particularly at national level. In addition, he assumed that the African countries had to depend on intra African cooperation if they had to overcome the barriers imposed against import from LDCs by industrialized countries.

9. In this regard, he stated that the only option left for member States in the subregion was to act collectively on planning and on the speedy implementation of

the manufacture of the basic and intermediate chemicals for agricultural chemicals and pharmaceuticals, taking into account the magnitude of investment required which was approximately estimated at US$1,300 million to establish production facilities comprising one unit of each of the projects of nitrogenous, phosphate and potash fertilizers and antibiotics and approximately US$2,600 million including investment for downstream facilities as well as transport equipment, an investment beyond the capacity of an individual country. Thus, in view of the characteristic chain of processing of the chemical industry, the projects under consideration offer possibilities for sharing production facilities.

10. Mr. Kimani called upon the meeting to find ways and means as to how the characteristics of the chemical industry can be exploited to the common and best advantage of the member States. He noted that these could best be achieved by exchanging information and experiences in the promotion and implementation of chemical projects, by identifying and examining critical factors and issues constraining the development of chemical industry at national and subregional levels and by making concrete recommendations for submission to the Fifth Meeting of the Lusaka MULPOC Council of Ministers.

11. Finally, he called upon the meeting to devote its attention to bringing about the urgently and badly needed collective, self-reliant and co-ordinated approach to the integrated development of vital agricultural chemical and pharmaceutical industries through the identification of potential areas and forms of co-operation among member States.

1. Presentation of country experience and major issues for discussion (Agenda item 4)

(a) Country experiences

12. During the discussion on the countries experiences, it was noted that in most of the countries of the subregion, the development of the chemical industrial subsector had not only been neglected, but had not also been given prominence in the various national development plans. This had resulted in the subsector being dominated by the subsidiaries of the transnational corporations.

13. A representative from Tanzania in presenting his country's experience stated that it was only in May 1980 that his government established a National Chemical Industries Corporation (NCI) to implement the government policy on the development of chemical industry. But prior to formation of NCI these activities were carried by another Industrial Development Corporation which was also in charge of other major industrial subsectors. He however pointed out that efforts to promote the development of chemical industry at national level had met with difficulties due to lack of raw materials, high infrastructural costs in developing the industry, lack of foreign exchange to purchase spare parts as well as raw materials, delays in delivering of raw materials from outside source and the opposition by the transnational corporations against the establishment of chemical industry in Africa and in the developing region in general.

14. In Kenya, it was stated that the government actually became involved in the development of a fertiliser factory around 1977 when a joint venture who negotiated with a foreign firm. Before that, the chemical industry depended on formulations including those related to pesticides and pharmaceuticals based on imported inputs. The Committee was informed that at about the same time, the government was involved in the local manufacture of pharmaceuticals in a joint-venture with a foreign firm. It was noted that chemicals were among the items (including raw materials, spare parts, machinery and fuel) which together accounted for about 50 per cent of the country's foreign exchange use.

15. The development of the chemical industry in Kenya had suffered from the domestic market that was unable to support an economic size plant. The prospects of using the neighbouring countries' markets had also been diminished by the fact that each country was striving to build its only chemical industry. The subregion was therefore faced with the problem of duplication of similar industries. It was further pointed out that a fertilizer plant which was planned for Mombassa had failed to materialize. The factors that were responsible for this state of affairs were lack of proper evaluation during the intial stages of the project implementation, the inadequate negotiating capability at the national level that could match that of the transnational corporation, and some degree of dishonesty on the part of the transnationals that imported old outmoded machineries.

16. The other problems which were cited as contributing to the operational difficulties of the chemical industries included, the lack of raw materials, the severe competition caused by the fact that while the local pharmaceutical firms were not getting tariff protection from the government and paying duties on imported raw material inputs, the imported finished products by the other transnational corporations were entering the country duty free (a situation similar to that in Tanzania). This had caused the government a substantial loss in revenue and foreign exchange especially with respect to medical products which the government provided to the people free because of its free medical policy.

17. In Ethiopia, it was stated that the chemical subsector was still at a rudimentary stage of development, hence about 90 per cent of the country's chemical needs were met through imports. Prior to 1974, the importance of the chemical subsector to the national economy had not been given any attention. In 1979, the government established National Chemicals Corporation with the objectives to organize, manage and operate government undertakings engaged in the manufacture of chemical products and raw materials processing, and to produce agricultural and industrial inputs such as fertilizers, insecticides, etc., as well as to carry out scientific and industrial research to develop the chemical subsector. It was indicated that Ethiopia had experienced problems similar to other countries as regards the constraints in the development of the chemical subsector, namely, limited domestic market, lack of adequate capital and lack of technical know-how in project formulation and implementation.

18. The country presentations showed that the countries were experiencing the same difficulties in setting up national chemical industries. In order to meet the challenge of internal and external factors impeding the development of chemical industry at national and multinational levels, the meeting agreed that solutions to these problems laid on the joint mobilization of material, financial and human resources of the countries concerned at multinational level. In this regard it was suggested that the governments should put greated emphasis on subregional co-operation, as means of bringing about co-ordination of national markets, avoidance of unnecessary duplication of efforts and competition, collective planning of chemical industries in the subregion,

the manufacture of the basic and intermediate chemicals for agricultural chemicals and pharmaceuticals, taking into account the magnitude of investment required which was approximately estimated at US$1,300 million to establish production facilities comprising one unit of each of the projects of nitrogenous, phosphate and potash fertilizers and antibiotics and approximately US$2,600 million including investment for downstream facilities as well as transport equipment, an investment beyond the capacity of an individual country. Thus, in view of the characteristic chain of processing of the chemical industry, the projects under consideration offer possibilities for sharing production facilities.

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establishment of joint ventures, and co-ordinating pricing policies. These would enhance the ability of the countries of the subregion to fully exploit new resources and and establish basic chemical industries which are some of the required prerequisites for genuine economic growth and development.

(b) The characteristics, strategies, priorities and constraints of the chemical subsector

19. Before the introduction of this agenda item the Chairman of the meeting spelt out the important role of the Intergovernmental Committee on Chemicals for Eastern and Southern Africa convened to promote interlinked accelerated and self-sustaining development of the chemical subsector in the subregion through national efforts and co-operation among member States.

20. Regarding membership of the Committee, the ECA secretariat proposed that in addition to member States it should include the subregional intergovernmental organizations. Furthermore, the Chairman and the Rapporteur of the meeting should visit some member countries which could not participate at the meeting in order to appraise them on the outcome of this meeting, and propose on what governments could undertake individually and collectively. The Chairman was also entrusted to present the report of this meeting to the next meeting of Lusaka MULPOC Council of Ministers.

21. In view of the poor attendance, three countries out of eighteen in the sub-region, the Kenyan delegation wondered whether it is appropriate for three countries to hold the meeting. Kenya requested the meeting to register its reluctance to deliberate on behalf of the absent majority. The ECA secretariat brought clarification and pointed out the many correspondence it had with countries of the subregion and that the meeting being an experts meeting, the legal aspect of quorum should not delay the deliberations of the meeting whose recommendations are expected to be presented at the next Lusaka Council of Ministers meeting.

22. The secretariat then introduced document ECA/INR/ESA/Chem/1/1 - Major Issues for Discussion. In presenting the paper, the representative of the secretariat stated that the chemical subsector is one of the major industrial subsectors. Together with the metal subsector, it forms the basic subsectors so essential for economic development in the true sense of the word. These two subsectors provide basic inputs to industry and other economic as well as social activities.

23. It is a well known fact that, with the exception of the traditional industries producing products such as cement, cotton textiles and processed food, import substitution industries in many African countries are completely dependent upon imported inputs and the chemical process industry is a typical case in point. In chemicals, except for some fertilizers plants which are based on imported ammonia, phosphate rock, sulphur and potash, many of the production facilities in the subregion are limited to mixing and formulating finished products imported in bulk.

24. These so called industries are in a precarious situation. Dependent as they are on outside suppliers for their inputs, these industries are exposed to all sorts of problems of which lack of foreign exchange for the purchase of their inputs is the main constraint. In recent years, prices of these inputs have been skyrocketing and availability of foreign exchange dwindling fast with the result that many such industries have to drastically limit their outputs and even close down for good. This situation, in all likelihood, will get worse.

25. The solution to the above bleak picture is to produce the required inputs locally, using domestic resources. This is however, not possible at the national level because of economies of scale and the very limited national markets - hence the need for collective planning.

26. Planning of the chemical subsector at either the national or multinational level requires knowledge of the characteristics of the subsector which are enumerated in Section II of the document entitled "Major Issues for Discussion" (ECA/INR/ES/Chem/1/1).

(i) Strategies

27. After introduction of the above working document, discussions followed on the strategies for developing the chemical subsector. The countries representatives briefed the meeting on their respective national strategies for developing chemical industry. In general, the subsector has amongst its objectives the production of chemicals (fertilizers and insecticides) and pharmaceutical products etc.

28. Discussions on the strategies for developing the chemical subsector led to the acceptance of the following strategies and recommendations:

(1) Import substitution at national and multinational levels

(2) Meet subregional import and export demand

(3) develop multiplier effect by producing those chemicals which are inputs to other industries

(4) Effective subregional economic community is necessary, particularly when the subregion is in the process of setting up a preferential trade area.

(5) Intra-country use of raw materials through equity share or buy-back arrangements should be encouraged.

(6) Continuous and overall co-ordination of efforts in the subregion is necessary.

(7) Foundation for the future should be laid down.

(ii) Problems and constraints

29. The Committee examined the problems and constraints which inhibited the development of the chemical subsector, and specifically the chemical priority areas. They are:

1. Characteristics of the industry

30. The diversified nature of the industry, inability of the small and fragmented national markets to support production facilities due to lack of economies of scale,

the consequences of high investment costs, need for optimum utilization of co- and by-products, and many options for raw material/process combinations make it virtually impossible for any country to be self-sufficient.

2. Co-operation and co-ordination

31. It was noted that there existed in the subregion, lack of cooperation and coordination in formulating and devising subsectoral policies and programmes, lack of co-operation and co-ordination among national producing companies and government purchasing agencies and among member States in pooling their resources to enhance industrial development, and lack of appropriate institutional arrangements such as chemical corporations at national and multinational levels.

3. Resources

32. The Committee stated that, although the subregion was endowed with substantial resources, it was not in a position to pronounce on them due to inadequate information. It urged all the member States to make available all information on natural resources (raw materials and energy) endowment.

33. The Committee further noted the lack of adequate trained manpower, finance and foreign exchange for project preparation and implementation.

4. Other problems

34. The Committee examined the various other problems and concluded that the member States should develop the public sector which would closely control the activities of foreign companies and private indigenous companies.

35. The Committee was also of the opinion that, in order to develop local industries, the member States should re-examine customs policies (duties etc.) relating to import of pharmaceuticals and other chemical products, especially in regard to anomalies whereby finished products are imported duty free while duties are levied on inputs for further processing.

2. Project profiles on chemical industries (agenda item 5)

36. In view of the above strategies, the Meeting approved the chemical project ideas considered in document ECA/MULPOC/Lusaka/IV/7. These are fertilizers (ammonia and phosphoric acid), pesticides and pharmaceuticals. Ammonia and phosphoric acid, two basic intermediates, together with potash are the major inputs for fertilizer production. The use of fertilizers and pesticides is the most expedient short- and long-term solution to food shortage.

37. In order to promote the use of these products within the subregion, the countries need to develop industries providing inputs to the basic needs producing industries (food, clothing, shelter and health), industries providing inputs for other industries, import substitution industries and industries involving an appreciable degree of technology development.

38. During deliberations, note was taken of the fact that limited national markets and lack of resources, i.e. technology, machinery and equipment, finance and know-how etc. impede the implementation of national priority projects and programmes, hence the need for subregional co-operation.

39. Before discussing the next item, the Chairman introduced the Lagos Plan of Action and stated that it was one of the most important documents as regards short-, medium- and long-term planning. He urged all the participants to study it thoroughly in order to know what the Heads of State and member States want in the industrial field.

(a) Fertilizers

40. After presentation by each country of its own experience in the field of fertilizers, it appeared that in Kenya and Tanzania most of the raw materials and other intermediate inputs were imported. It was reported that the Kenyan project on fertilizers failed because of poor planning and inadequacy of negotiating capability with multinational companies. However the government has since formed a parastatal organization to pursue the possibility of establishing another fertilizer plant in the near future.

41. In Tanzania, phosphate and nitrogenous fertilizers are produced from imported phosphate rock, liquid ammonia and sulphur. The plant will start utilizing domestic phosphate rock at the beginning of 1983. An ammonia-urea complex based on natural gas from Songo-Songo is planned to begin production by 1985.

42. In Ethiopia, a market survey is being carried out on Danakil potash deposit which offers the advantages of open cast exploitation and of being located near the coast and hence near potential markets in Africa and Asia.

43. The meeting noted with satisfaction the fact that except for sulphur all raw materials needed to produce fertilizers are available in the subregion.

(b) Pesticides

44. In introducing the document a member of the secretariat stated that, due to lack of adequate information, it was not possible to give figures in quantity and, therefore figures need to be expressed in monetary figures which because of inflation tended to show high increase in consumption. In addition, there was the problem of identifying the exact pesticides used in the subregion.

45. He said that the broad spectrum chlorinated insecticides (DDT, BHC) had been banned in developed countries and the trend was to replace them with specific insecticides. However, the substitutes tended to be very expensive as compared to the cost of DDT. For this reason, WHO had expressed its opinion against banning completely the use of such insecticides in developing countries.

46. During the discussion, the members identified several problem areas: multiplicity of brand names (over 90 names in some cases); the control of this sector by transnationals, preference of imported products by the users and the general lack of education of farmers.

47. The consensus was that although some inputs for manufacturing pesticide were locally available, there would still be need to import a number of the inputs for some time to come. Since pesticides were necessary ingredients for the reduction of food crop losses, they were therefore as important as fertilizers. The meeting therefore recommended that the use of local raw materials be encouraged including the use of fillers, diluents and solvents. It was further recommended that more local use should be made of pyrethrum, instead of exporting it.

(c) Pharmaceuticals

48. After the introduction of the section on pharmaceuticals, the Chairman stressed the need for indigenous production of pharmaceuticals using local and/or imported raw materials.

49. Regarding antibiotics the secretariat stated that raw materials did not constitute a problem. The constraints were rather the size of the production units which were too large for national needs and secondly the strictness of quality control requirements during the manufacturing process.

50. Presentation of country experience showed that the countries had similar problems. The problems encountered in the pharmaceutical field are exemplified by the Tanzanian experience. The Tanzanian government has under the guidance of WHO compiled a list of essential drugs. A survey on most common diseases has identified 120-140 drugs most commonly used, and these were classified into 21 groups. However, the survey revealed that most of the ailments were due to lack of sufficient food.

51. The delegates then enumerated the various constraints facing the industry to comprise, inter alia, variety of products and inputs, shortage of capital, high degree of skills required, strict quality control requirement, lack of fiscal incentives because of leavy of import duties on imported inputs whereas imported finished products were allowed in duty free, and raw materials competing with food supply requirements. The delegates felt that clear health programmes are required by all countries in order to establish subregional plants.

52. Regarding the selection of products suitable for local manufacture, the secretariat stated that the ECA would be preparing a model prefeasibility study on pharmaceutical formulation. In this connexion, a consultant would be sent to the WHO Regional Office, Brazaville in order to consult WHO in the selection of generic products which should form the basis for the study.

53. Among the project profiles submitted, the meeting felt that, to start with, the following multinational units or plants be urgently established in the subregion:

(i) one ammonia plant based on natural gas resulting in the most economic process route, that is least investment and production cost. However studies should be carried out to ascertain the adequacy of natural gas in the countries concerned.

(ii) two phoshoric acid plants

(iii) one potash plant

(iv) Pesticides: A real market for pesticides was recognised to exist in the subregion.

(v) Pharmaceuticals: The meeting noted that pharmaceuticals offered wide scope for distribution of production facilities as products and inputs were numerous within the various branches hence there was a much larger scope for subregional co-operation. It was suggested that pharmaceutical plants producing active ingredients should be established within the subregion.

3. Special issues requiring recommendations and follow-up (agenda item 6)

54. The meeting examined the various modalities suggested by the secretariat, namely:

(a) purchasing outputs of the host plant/company;

(b) same as (a) and investing as minority shareholders;

(c) investing as majority shareholders in and purchasing outputs of the multinational plant/company managed by the host country;

(d) same as (c) but jointly managed by all member States concerned; and

(e) same as (d) but the multinational company becomes one of the companies of a subregional chemical corporation.

55. After a lengthy discussion on the various alternatives the Committee agreed that alternative (e) appeared to be the most suitable. The Committee however stressed the need for clear definition and elaboration of this option by the ECA Secretariat.

4. Project document on chemical industry development programme (agenda item 7)

56. A representative of ECA introduced the project document on chemical industry Development Programme which was already submitted for UNDP financing. The meeting examined the project document and gave it its support.

D. CONCLUSIONS AND RECOMMENDATIONS

1. Special issues relating to policies, strategies, programmes, co-operation

(a) Formulation of policies and strategies for the development and promotion of the selected basic products

57. The Committee expressed the hope that the member States would re-examine the planning and location of chemical industries with a view to furthering sub-regional co-operation. In this connexion, member States should take bold steps in and give more attention to the development of chemical industries by spelling out clearly, policies and strategies in their national development plans.

(b) Formulation of programme for the basic production facilities

58. The Committee was of the opinion that the member States should make long-term programmes (e.g., 5 years or 10 years) in the context of the whole subregion taking into account:

(i) optimum utilization of resources and infrastructures (optimum location) leading to the production of competitive products;

(ii) existing related national production facilities and projects including the possibility of converting such facilities and projects into multinational ones;

(iii) linkages with existing and planned/proposed downstream processing facilities up to formulation and mixing stages.

(c) Modalities for co-operation and co-ordination

(i) Pooling of markets and resources

59. The Committee welcomed the proposed PTA and requested that it should assist in pooling of national markets and resources. In this regard, the meeting recommended that member States should undertake an effective collective planning for and co-ordination of marketing activities.

(ii) Joint exploitation and exchange of raw materials and energy resources

60. The Committee felt that member States should strengthen their effort in the joint exploitation and exchange of raw materials and energy and that there should be a mutual exchange of information on these resources.

(iii) Joint manpower development

61. The Committee agreed that all efforts should be made for manpower development and that existing national institutions (universities, training centres, etc.) should be made available to member States of the subregion in order to build up the manpower requirements. It noted with satisfaction the establishment of the African Higher Technical Training and Research Institute at Nairobi which should be used to the fullest extent by the member States.

(iv) Joint approach to securing consultancy services, technology, machinery and equipment, etc.

62. The Committee welcomed the idea of and supported the setting up of an African Regional Centre for Consultancy and Industrial Management Services and recommended that the chemical subsector should make full use of it. It also welcomed the proposed establishment of four subregional consultancy services including the one for the Eastern and Southern African countries. It further welcomed the newly created institutions such as the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM), Ibadan, Nigeria, and the African Regional Centre for Technology (ARCT), Dakar, Senegal.

(v) Joint mobilization of funds

63. The Committee noted with satisfaction that a start had already been made in this direction with the creation of East African Development Bank and recommended that this should be extended to cover the rest of the subregion. It also welcomed the establishment of the African Industrial Development Fund (AIDF) which could help the development of the chemical subsector.

(vi) Establishment of project implementation machinery

64. The Committee noted with satisfaction that the implementation of such machinery had already been started in some countries, e.g., Tanzania and Ethiopia and recommended that more national and multinational corporations or similar institutions be set up for the development of the chemical subsector.

2. Project Profiles on Chemical Industry

(a) Priorities

65. The participants approved the priorities listed in the project profiles and identified the various areas of co-operation. As a starting point for future co-operation, the meeting recommended the establishment of the following chemical units or plants at the subregional level:

(i) one ammonia plant based on natural gas;

(ii) two phosphoric acid plants

(iii) one potash plant;

(iv) active ingredient pesticide plants;

(v) antibiotic and other pharmaceutical active ingredient plants.

(b) Plant location

66. On the basis of resources endowment and other relevant factor inputs the meeting recommended the following countries as the potential hosts for the chemical plants under consideration, subject to further investigations and feasibility studies:

(i) Ammonia plants: Tanzania, Mozambique, Angola and Ethiopia;

(ii) Phosphoric acid plants: Uganda, Tanzania, Zimbabwe, Malawi and Angola;

(iii) Potash plant: Ethiopia;

(iv) Pesticides and pharmaceuticals: to be determined.

3. Proposed follow-up activities

67. The meeting recommended that:

(a) follow-up visits by the Chairman and the Rapporteur be made to member States to brief them and to entertain their views on the development of chemical industry and proposed chemical plants;

(b) the Chairman should present the report of the meeting to the next Lusaka MULPOC Council of Ministers;

(c) members of the Intergovernmental Committee of Experts on Chemicals for Eastern and Southern Africa are urged to follow up actively the recommendations of this meeting at national level and whenever possible at subregional level;

(d) member States are urged to attend and actively participate in future intergovernmental meetings on chemical industry;

(e) member States take action to ascertain the commercial viability of raw materials deposits and sources of energy;

(f) a questionnaire be sent to each member State seeking information on the availability of and access to raw materials and energy, existing capacities and planned projects, projection of demand for the major chemicals under consideration. The duly filled questionnaires should reach ECA by 31 December 1981 the latest.

4. Other recommendations

68. The Committee made the following additional recommendations:

(a) The Committee recommended the setting up of an autonomous subregional chemical multinational corporation which would act as a holding company and undertake activities similar to those of transnational corporations. To this end the Committee recommended that feasibility study be carried out.

(b) In view of the potentiality of chemicals from biomass, member States are advised to examine the possibilities of producing chemicals from biomass, particularly those which serve as inputs for the manufacture of agricultural chemicals and pharmaceuticals.

(c) the meeting urged UNIDO to approve the Project Document on Chemical Industry Development Programme and provide the necessary funds for the implementation of the priority projects and programmes contained therein.

(d) In view of the increasing role that intergovernmental organizations 1/ are expected to play, as the development of multinational projects progresses, the meeting recommended their membership in the Committee.

(e) The Meeting decided that ECA in consultation with the Chairman will determine the date and venue and prepare the agenda for the second meeting after the Conference of Ministers of Industry scheduled for 23-25 November 1981.

5. Concluding remark

69. The Committee was fully aware that potential opposition from outside vested interests and transnational corporations exists but stressed that it should not deter the member States from formulating and implementing a subregional programme.

E. ADOPTION OF THE REPORT AND CLOSING OF THE MEETING

70. The draft report of the First Meeting of Intergovernmental Committee of Experts on Chemicals for Eastern and Southern Africa was adopted with the necessary amendments. Following his closing remarks the Chairman declared the Meeting closed at 7:10 p.m. on Friday, 18 September 1981.

1/ The East African Development Bank (EADB), Kampala, Uganda

Southern African Development Bank (SADB), Salisbury, Zimbabwe

Beast African Minerals Development Centre (EAMDC), Dodoma, Tanzania

African Institute for Higher Technical Training and Research (AIHTTR), Nairobi, Kenya

Southern African Development Co-ordination Council (SADEC), Gaborone, Botswana

African Development Bank (ADB), Abidjan, Ivory Coast

The Arab Bank for Economic Development in Africa (ABEDA), Khartoum, Sudan

African Regional Centre for Engineering Design and Manufacturing (ARCEDEM), Ibadan, Nigeria

African Regional Centre for Technology (ARCT), Dakar, Senegal

Organisation Commune Africaine et Mauricienne (OCAM), Bangui, Central African Republic

African Industrial Development Bank (AIDF), Abidjan, Ivory Coast